

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number
WO 2004/087067 A3

(51) International Patent Classification⁷: **A61K 38/16**

(21) International Application Number:
PCT/US2004/009550

(22) International Filing Date: 29 March 2004 (29.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/457,911 28 March 2003 (28.03.2003) US

(71) Applicant (for all designated States except US): **SCI-CLONE PHARMACEUTICALS, INC.** [US/US]; 901 Mariner's Island Blvd., Suite 205, San Mateo, CA 94404 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RASI, Guido** [IT/IT]; Lungotevere Flaminio, 78, I-00196 Rome (IT). **GARACI, Enrico** [IT/IT]; Via Salaria, 237, I-00199 Rome (IT). **BISTONI, Francesco** [IT/IT]; Via F. Briganti, 85, I-06127 Perugia (IT). **ROMANI, Luigina** [IT/IT]; Via Villaggio Santa Livia, 1, I-06123 Perugia (IT). **DI FRANCESCO, Paolo** [IT/IT]; Via L. A. Melegari, 16, I-00191 Rome (IT).

(74) Agents: **REPPER, George, R.**, et al.; Rothwell, Figg, Ernst & Manbeck, P.C., 1425 K Street, N.W., Suite 800, Washington, DC 20005 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
29 December 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TREATMENT OF ASPERGILLUS INFECTIONS WITH THYMOSIN ALPHA 1

(57) Abstract: A method for treating a human infected with Aspergillus by using thymosin alpha 1 as an immuno-stimulator in activating dendritic cells. The method is particularly useful in preventing an infection by Aspergillus in an immuno-compromised host being treated with a bone marrow transplantation.

WO 2004/087067 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/09550

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 38/16
US CL : 514/2

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 514/2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ROMANI, L. Thymosin Alpha-1 Activates Dendritic Cells for Antifungal Th1 Resistance through Toll-like Receptor Signaling. Blood. 1 June 2004, Vol. 103, No. 11, pages 4232-4239.	1-12
A	US 6,001,799 (CHRETIEN, et al) 14 December 1999 (14.12.1999), claims 3 and 5, examples 2-6.	1-5,7,8,12

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

23 September 2004 (23.09.2004)

Date of mailing of the international search report

15 OCT 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Andrew D Kosar
Telephone No. (571)272-1600

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/09550

Continuation of B. FIELDS SEARCHED Item 3:
PUBMED, EAST, STN (files: DRUGB, DRUGU, EMBASE, CABA, ADISINSIGHT, CAPLUS): thymosin, amphotericin, fungus,
fungal, aspergillus, aspergillosis.